

Kindly amend the above-identified application as set forth below:

In the Claims:

JUL 11
1. (Amended) A process for the simultaneous production of xylitol and ethanol from a starting material of hydrolyzed lignocellulose-containing material, comprising fermenting said hydrolyzed lignocellulose-containing material with a yeast strain which is capable of converting free xylose to xylitol and free hexose present to ethanol to form a fermented product comprising xylitol, ethanol and yeast, recovering the resulting ethanol and chromatographically separating a xylitol-containing fraction from the remaining fermented product, and recovering xylitol from said xylitol-containing fraction, wherein substantially all of the starting material is utilized.

C2 Jul 11
3. (Amended) The process according to Claim 1, wherein said lignocellulose-containing material is birch or grain hulls.

Cancel Claim 4 without prejudice.

G7 Jul 11
5. (Amended) The process according to Claim 1, further comprising crystallizing pure xylitol from the xylitol-containing fraction obtained in the chromatography step.

G4 Jul 11
11. (Amended) The process according to Claim 1, wherein hydrolysis is carried out by steam explosion and enzymatic hydrolysis.

G5
21. (Amended) The process according to Claim 1 wherein the lignocellulose-

GS

containing material is treated by steam explosion followed by hydrolysis.

~~Cancel Claim 22 without prejudice.~~

23. (Amended) A process for the simultaneous production of xylitol and ethanol from a hydrolyzed starting material of lignocellulose-containing material selected from the group consisting of softwood, birch, beech, poplar, alder, plants, plant constituents, straw, hulls of wheat, corn, oat, barley, corn cobs, corn stems, nutshells, bagasse, cottonseed bran, wood chips, sawdust, sulphite spent liquor from woodpulp processing, waste from paper processing, waste from woodpulp processing, comprising:

fermenting said hydrolyzed lignocellulose-containing material to produce a fermented solution with a yeast capable of converting free xylose present to xylitol and free hexose present to ethanol, said yeast selected from the group consisting of a yeast of the genera *Candida*, *Pichia*, *Pachysolen*, and *Debaryomyces*, said fermenting comprising reducing said free xylose to xylitol and reducing said hexose to ethanol, and said fermented solution comprising xylitol, ethanol, and spent yeast;

separating a substantial portion of said spent yeast from said fermented solution to produce a substantially clarified solution comprising ethanol and xylitol, said clarified solution comprising substantially less spent yeast by weight on a dry solids (substance) basis than said spent yeast in said fermented solution, and said separating comprising at least one separating method selected from group consisting of filtration, centrifugation and decanting;

recovering ethanol by distillation;

recovering xylitol by chromatographic separation; and

Gul H3

crystallizing said xylitol to produce xylitol crystals; wherein substantially all of the starting material is utilized.

Sut F

G6 cont

24. (Amended) A method according to Claim 23 wherein hydrolysis comprises at least one of the following: i) prehydrolysis of said lignocellulose-containing material by steam explosion of said lignocellulose-containing material and enzymatic hydrolysis of said lignocellulose-containing material with enzymes having a celluloytic and xylanolytic activity to hydrolyze said lignocellulose-containing material; and ii) acid hydrolysis of said lignocellulose-containing material.

G7

26. (Amended) A method according to Claim 23 wherein said yeast is selected from the group consisting of genera *Candida tropicalis* strain having an accession number ATCC 9968, and *Debaryomyces hansenii*.

30. (Amended) A method according to Claim 23 wherein:
said hexose in said xylose-containing solution further comprises arabinose.

G8

31. (Amended) A process for the simultaneous production of xylitol and ethanol from a starting material of lignocellulose-containing material, comprising:

partially hydrolyzing said lignocellulose-containing material;
separating said partially hydrolyzed lignocellulose-containing material into an extracted biomass and a prehydrolyzate comprising free xylose;
hydrolyzing said extracted biomass to produce an hydrolyzate

GJ/CW
cont'd

comprising hexose;
said fermenting comprises
fermenting said hydrolyzate to produce a fermented solution
comprising ethanol; and
fermenting said prehydrolyzate to produce a fermented solution
comprising xylitol; wherein substantially all of the starting material is utilized.

32. (New) A process for the simultaneous production of xylitol and ethanol from a starting material of sulphite spent liquor, comprising fermenting said starting material with a yeast strain which is capable of converting free xylose to xylitol and free hexose present to ethanol to form a fermented product comprising xylitol, ethanol and yeast, recovering the resulting ethanol and chromatographically separating a xylitol-containing fraction from the remaining fermented product, and recovery of xylitol from said xylitol-containing fraction, wherein substantially all of the starting material is utilized.

G9

33. (New) A method according to Claim 23 wherein the starting material is pretreated.

34. (New) A method according to Claim 33 further comprising at least one of the following chromatographic separation, ion-exchange purification and precipitation.

REMARKS

Reconsideration of the subject patent application is respectfully requested in view of the preceding amendments and accompanying remarks.

Claims 1, 3, 5-13, 15-16, 19-21 and 23-34 are pending in the subject